



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Izbrana poglavja iz entomologije
Course title:	Selected Topics in Entomology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski študij Ekološke znanosti, 3. stopnja		1. ali 2.; 1st or 2nd	1.- 4.; 1st-4th
Doctoral Study Ecological Sciences, 3rd degree			

Vrsta predmeta / Course type: Izbirni/Elective

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. vaje Laboratory work	Terenske vaje Field work	Samost. delo Individ. work	ECTS
15			10	5	150	6

Nosilec predmeta / Lecturer: Jan PODLESNIK

Jeziki / Predavanja / Lectures: slovenščina / Slovene
Languages: Vaje / Tutorial: slovenščina / Slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Vsaka izmed naštetih obveznosti v načinih ocenjevanja mora biti opravljena s pozitivno oceno.

Pozitivna ocena iz seminarske naloge je pogoj za pristop k pisnemu izpitu.

Prerequisites:

Each of the mentioned commitments must be assessed with a passing grade.

Passing grade of the seminar paper is required for taking the written exam.

Vsebina:

Content (Syllabus outline):

Obravnavana so izbrana poglavja iz naslednjih poglavij:

Pregled morfologije, anatomije in fiziologije žuželk.

Interakcije med žuželkami in drugimi organizmi.

Uvod v medicinsko entomologijo.

Invazivne žuželke.

Varstvo biodiverzitete žuželk.

Selected topics in the following chapters are discussed:

A review of the morphology, anatomy, and physiology of insects.

Interactions between insects and other organisms.

An introduction to medical entomology.

Invasive insects.

Insect diversity conservation.

Temeljni literatura in viri / Readings:

Temeljni viri / Basic:

Chapman, R. F. (2016). *The insects: structure and function* (5th ed., str. XXXI, 929). Cambridge University Press.

Gullan, P. J., & Cranston, P. S. (2014). *The insects: an outline of entomology* (5th ed., str. XXIV, 595). Wiley Blackwell.

Devetak, D., V. Klokočovnik V., 2016: The feeding biology of adult lacewings (Neuroptera): a review. *Trends in Entomology* 12: 29-42.

Priporočeni viri / Recommended:

Triplehorn, C. A., & Johnson, N. F. (2005). *Borror and DeLong's Introduction to the Study of Insects* (7th ed., str. X, 864). Thomson Brooks/Cole.

Schowalter, T. D. (2022). *Insect ecology: an ecosystem approach* (5th ed., str. XII, 928). Academic Press; Elsevier.

Jurc, M. (2011). *Gozdna zoologija: [univerzitetni učbenik]* (3. natis, str. XI, 348). Biotehniška fakulteta, Oddelek za gozdarstvo in obnovljive gozdne vire. <https://repozitorij.uni-lj.si/IzpisGradiva.php?id=124306>

Cilji in kompetence:

Objectives and competences:

- Poznavanje biologije žuželk in razumevanje interakcij med žuželkami in drugimi organizmi.
- Z razumevanjem bionomije, avtekologije in demekologije različnih žuželčnih vrst študentje podrobno spoznajo njihovo vlogo in pomen v ekosistemu.
- Podrobno razumejo potrebe po naravovarstvu žuželk.

- Understanding biology of insects and their interactions with other organisms.
- By understanding the bionomy, autecology, and demecology of various insect species in detail, students learn about their role and importance in ecosystem.
- Understanding in detail the need for conservation of insects.

Predvideni študijski rezultati:

Po uspešno opravljeni učni enoti naj bi bili študenti zmožni:

- pojasniti in diskutirati prednosti holometabolnih žuželk pred hemimetabolnimi;
- razumeti in pojasniti kompleksno vlogo žuželk v ekosistemih;
- razložiti vlogo izbranih žuželk v gozdnih in kmetijskih ekosistemih.

Intended learning outcomes:

By the end of this course students should be able to:

- explain and discuss the advantage of holometabolous vs hemimetabolous insects;
- understand and explain complex role of insects in ecosystems;
- explain the role of selected insects in forest and agricultural ecosystems.

Metode poučevanja in učenja:

- Predavanja
- Terensko delo
- Laboratorijsko delo.

Learning and teaching methods:

- Lectures
- Field work
- Laboratory work.

Načini ocenjevanja:

- Seminarska naloga
- Pisni izpit

Delež (v %) /
Weight (in %)

Assessment:

- Seminar paper
- Written exam

Reference nosilca / Lecturer's references:

DEVETAK, Dušan, NAHIRNIĆ, Ana, JAKŠIĆ, Predrag, KLOKOČOVNIK, Vesna, KLENOVŠEK, Tina, BADANO, Davide, PODLESNIK, Jan. Review of Antlions (Insecta: Neuroptera: Myrmeleontidae) in North Macedonia. *Acta zoologica bulgarica*. 2023, vol. 75, no. 2, str. 169-180, ilustr. ISSN 0324-0770. <https://www.acta-zoologica-bulgarica.eu/2023/002661.pdf>, [Digitalna knjižnica Univerze v Mariboru – DKUM](#). [COBISS.SI-ID 161353987], [JCR, SNIP]

MARTINEZ, Vanessa, SILLAM-DUSSÈS, David, DEVETAK, Dušan, LORENT, Vincent, PODLESNIK, Jan. Antlion larvae localize long distant preys by a mechanism based on time difference. *Journal of comparative physiology. A, Sensory, neural, and behavioral physiology*. 2024, vol. 210, iss. 1, str. 35-45, ilustr. ISSN 0340-7594. DOI: 10.1007/s00359-023-01641-x. [COBISS.SI-ID 154663171]

PODLESNIK, Jan. Pupal development and adult acclimation temperatures influence the cold and heat tolerance in *Tenebrio molitor* (Coleoptera: Tenebrionidae). *Insects*. 2025, vol. 16, iss. 4, [article no.] 402, 11 str., ilustr. ISSN 2075-4450. <https://doi.org/10.3390/insects16040402>, Digitalna knjižnica Univerze v Mariboru – DKUM, DOI: 10.3390/insects16040402, DOI: 20.500.12556/DKUM-92506. [COBISS.SI-ID 232765699]